

IN THE CLAIMS

1. (Currently amended) A method comprising:
- forming a process layer above a semiconducting substrate;
- etching at least a portion of said process layer;
- measuring a first depth of the etch at a first location in a first preselected region of a plurality of preselected regions of the semiconducting substrate, wherein each of the plurality of preselected regions of the semiconducting substrate has an associated temperature adjusting element;
- comparing the first depth to a desired depth; and
- providing an indication to the temperature adjusting element associated with the first preselected region to adjust the temperature in response to the first depth being different from the desired depth; and
- adjusting the temperature of at least a portion of the first preselected region in response to receiving the indication.
- ~~varying the temperature of a subsequently processed semiconducting substrate in a region corresponding to the first preselected region in response to the first depth being different from the desired depth.~~

2. (Currently amended) A method, as set forth in claim 1, further comprises:

measuring the depth of the etch at a second location in a second preselected region of the semiconducting substrate;

comparing the second depth to a second desired depth; and
providing a second indication to a second temperature adjusting element associated with
the second preselected region to adjust the temperature in response to the second
depth being different from the second desired depth; and
adjusting the temperature of at least a portion of the second preselected region in response
to receiving the second indication, varying the temperature of the subsequently
processed semiconducting substrate in a region corresponding to the second
preselected region in response to the second depth being different from the desired
depth.

3. (Original) A method, as set forth in claim 1, wherein comparing the first depth to
a desired depth further comprises:

measuring a second depth of the etch at a second location in a second preselected region
of the semiconducting substrate; and
setting the desired depth to the second depth.

4. (Currently amended) A method, as set forth in claim 2, wherein varying the
temperature ~~further~~ comprises raising the temperature of the subsequently processed
semiconducting substrate in the region corresponding to the second preselected region in
response to the second depth being less than the desired depth.

5. (Currently amended) A method, as set forth in claim 2, wherein the temperature
adjusting element is a cooling element, wherein varying adjusting the temperature further

comprises lowering the temperature of at least the portion of the first preselected region,the subsequently processed semiconducting substrate in the region corresponding to the second preselected region in response to the second depth being greater than the desired depth.

6. (Original) A method, as set forth in claim 1, wherein forming a process layer above a semiconducting substrate comprises forming a process layer comprised of at least one of an oxide, an oxynitride, polysilicon, and a metal above a semiconducting substrate.

7. (Original) A method, as set forth in claim 1, wherein etching at least a portion of said process layer further comprises performing a plasma etching process on at least a portion of the process layer.

8. (Currently amended) A method, as set forth in claim 1, wherein the temperature adjusting element is a heating element, wherein adjusting the temperature comprises raising the temperature of at least the portion of the first preselected region, wherein varying the temperature of the subsequently processed semiconducting substrate in the region corresponding to the first preselected region further comprises varying the temperature of the subsequently processed semiconducting substrate in the region corresponding to the first preselected region as a function of the difference.

9. (Original) A method, as set forth in claim 1, wherein measuring the first depth further comprises:

measuring the depth at a plurality of locations in the first region; and

averaging the plurality of measured depths to determine the first depth.

10. (Original) A method, as set forth in claim 1, wherein measuring the first depth further comprises:

measuring the depth at a plurality of locations in the first region; and
selecting the smallest measured depth to be the first depth.

11. (Original) A method, as set forth in claim 1, wherein measuring the first depth further comprises:

measuring the depth at a plurality of locations in the first region; and
selecting the greatest measured depth to be the first depth.

12. (Original) A method, as set forth in claim 1, wherein measuring the first depth further comprises:

measuring the depth at a plurality of locations in the first region; and
selecting the median measured depth to be the first depth.

13. (Currently amended) A method comprising:

forming a process layer above a semiconducting substrate;

etching at least a portion of said process layer;

measuring a first-depth of the etch at a first plurality of locations in a first preselected region of the semiconducting substrate;

measuring a second depth of the etch at a second plurality of locations in a second preselected region of the semiconducting substrate;

determining if at least a portion of the first preselected region is etched to a first desired depth based on the measured depth of the plurality of locations in the first preselected region comparing the first depth to a desired depth;

varying the temperature of a subsequently processed semiconducting substrate in a region corresponding to the first preselected region in response to determining the at least the portion of the first preselected region is not etched to the first desired depth the first depth being different from the desired depth;

determining if at least a portion of the second preselected region is etched to a second desired depth based on the measured depth of the plurality of locations in the second preselected region; comparing the second depth to a desired depth; and

varying the temperature of a subsequently processed semiconducting substrate in a region corresponding to the second preselected region in response determining the at least the portion of the second preselected region is not etched to the second desired depth to the second depth being different from the desired depth.

14. (Currently amended) A method, as set forth in claim 13, wherein varying the temperature further comprises raising the temperature of the subsequently processed semiconducting substrate in the region corresponding to the second preselected region in response to determining the at least the portion of the second preselected region is etched the second depth being less than the second desired depth.

15. (Currently amended) A method, as set forth in claim 13, wherein varying the temperature further comprises raising the temperature of the subsequently processed semiconducting substrate in the region corresponding to the first preselected region in response determining the at least the portion of the first preselected region is etched to the first depth being less than the first desired depth.

16. (Original) A method, as set forth in claim 13, wherein forming a process layer above a semiconducting substrate comprises forming a process layer comprised of at least one of an oxide, an oxynitride, polysilicon, and a metal above a semiconducting substrate.

17. (Original) A method, as set forth in claim 13, wherein etching at least a portion of said process layer further comprises performing a plasma etching process on at least a portion of the process layer.

18. (Currently amended) A method, as set forth in claim 13, wherein varying the temperature of the subsequently processed semiconducting substrate in the region corresponding to the first preselected region ~~further~~ comprises varying the temperature of the subsequently processed semiconducting substrate in the region corresponding to the first preselected region as a function of the difference.

19. (Currently amended) A method, as set forth in claim 13, wherein measuring the ~~the first depth at the plurality of locations in the first preselected region~~ ~~further~~ comprises ~~measuring the depth at a plurality of locations in the first region; and~~

averaging the plurality of measured depths, and wherein determining if at least the portion of the first preselected region is etched to the first desired depth comprises comparing the average of the plurality of the measured depths to the first desired depth to determine the first depth.

20. (Currently amended) A method, as set forth in claim 13, wherein measuring the depth at the plurality of locations in the first preselected region comprises determining the smallest measured depth of the plurality of measured depths, and wherein determining if at least the portion of the first preselected region is etched to the first desired depth comprises comparing the smallest measured depth of the plurality of the measured depths to the first desired depth, wherein measuring the first depth further comprises:

~~measuring the depth at a plurality of locations in the first region; and
selecting the smallest measured depth to be the first depth.~~

21. (Currently amended) A method, as set forth in claim 13, wherein measuring the depth at the plurality of locations in the first preselected region- comprises determining the greatest measured depth of the plurality of measured depths, and wherein determining if at least the portion of the first preselected region is etched to the first desired depth comprises comparing the greatest measured depth of the plurality of the measured depths to the first desired depth, wherein measuring the first depth further comprises:

~~measuring the depth at a plurality of locations in the first region; and
selecting the greatest measured depth to be the first depth.~~

22. (Currently amended) A method, as set forth in claim 13, wherein measuring the depth at the plurality of locations in the first preselected region comprises determining a median of the plurality of measured depths, and wherein determining if at least the portion of the first preselected region is etched to the first desired depth comprises comparing the median of the plurality of the measured depths to the first desired depth. ~~wherein measuring the first depth further comprises:~~

~~measuring the depth at a plurality of locations in the first region; and selecting the median measured depth to be the first depth.~~

Claims 23-35 have been previously withdrawn.

36. (Newly Added) An apparatus, comprising:

means for forming a process layer above a semiconducting substrate;

means for etching at least a portion of said process layer;

means for measuring a first depth of the etch at a first location in a first preselected region of the semiconducting substrate, wherein the first preselected region of the semiconducting substrate has an associated temperature adjusting element;

means for comparing the first depth to a desired depth;

means for providing an indication to the temperature adjusting element associated with the first preselected region to adjust the temperature in response to the first depth being different from the desired depth; and

means for adjusting the temperature of at least a portion of the first preselected region in response to receiving the indication.

37. (Newly Added) An apparatus, comprising:

an interface;

a controller communicatively coupled to the controller, the controller adapted to:

form a process layer above a semiconducting substrate;

etch at least a portion of said process layer;

measure a first depth of the etch at a first location in a first preselected region of the semiconducting substrate, wherein the first preselected region of the semiconducting substrate has an associated temperature adjusting element;

compare the first depth to a desired depth;

provide an indication to the temperature adjusting element associated with the first preselected region to adjust the temperature in response to the first depth being different from the desired depth; and

cause the temperature adjusting element to adjust the temperature of at least a portion of the first preselected region in response to the temperature adjusting element receiving the indication.

38. (Newly Added) The apparatus of claim 37, wherein the control unit is adapted to cause the temperature adjusting element to lower the temperature of the at least the portion of the first preselected region.

39. (Newly Added) The apparatus of claim 37, wherein the control unit is adapted to cause the temperature adjusting element to increase the temperature of the at least the portion of the first preselected region.

40. (Newly Added) The apparatus of claim 37, wherein the control unit is adapted to measure the first depth comprises the control unit adapted to measure a depth at a plurality of locations in the first region and average the plurality of measured depths to determine the first depth.